

NOTICE OF INTENT

Department of Environmental Quality
Office of Environmental Assessment
Environmental Planning Division

Under the authority of the Environmental Quality Act, R.S. 30:2001 et seq., and in accordance with the provisions of the Administrative Procedure Act, R.S. 49:950 et seq., the secretary gives notice that rulemaking procedures have been initiated to amend the Water Quality regulations, LAC 33:IX.1105, 1111, 1113, 1115, 1117, 1121, and 1123 (Log #WP033).

The water quality standards establish provisions for the protection of instream water quality and consist of policy statements, designated water uses, and numerical and narrative criteria, which sets limits for various water quality parameters. This proposed revision to the current water quality standards includes: addition of new language that states the use of clean or ultra clean techniques may be necessary in some situations; revision of several numerical criteria with current data; addition of updated and new references for biomonitoring; revision of numerical criteria and designated uses table; and addition of language to clarify the links between dissolved oxygen and the designated uses for fish and wildlife propagation. The water quality standards are applicable to the ambient surface waters of streams and other waterbodies of the state and do not apply to groundwater. The basis and rationale for this proposed rule are to comply with federal law governing water quality standards that requires states to review and revise, as appropriate, their water quality standards every three years [Water Quality Act of 1987 PL 100-4 Section 303(c)].

This proposed rule meets an exception listed in R.S. 30:2019 (D) (3) and R.S.49:953 (G) (3); therefore, no report regarding environmental/health benefits and social/economic costs is required. This proposed rule has no known impact on family formation, stability, and autonomy as described in R.S. 49:972.

A public hearing will be held on September 27, 1999, at 1:30 p.m. in the Trotter Building, Second Floor, 7290 Bluebonnet Boulevard, Baton Rouge, LA 70810. Interested persons are invited to attend and submit oral comments on the proposed amendments. Should individuals with a disability need an accommodation in order to participate, contact Patsy Deaville at the address given below or at (225) 765-0399.

All interested persons are invited to submit written comments on the proposed regulations. Commentors should reference this proposed regulation by WP033. Such comments must be received no later than October 4, 1999, at 4:30 p.m., and should be sent to Patsy Deaville, Regulation Development Section, Box 82178, Baton Rouge, LA 70884-2178 or to FAX (225) 765-0486. Copies of this proposed regulation can be purchased at the above referenced address. Contact the Regulation Development Section at (225) 765-0399 for pricing information. Check or money order is required in advance for each copy of WP033.

This proposed regulation is available for inspection at the following DEQ office locations

from 8 a.m. until 4:30 p.m.: 7290 Bluebonnet Boulevard, Fourth Floor, Baton Rouge, LA 70810; 804 Thirty-first Street, Monroe, LA 71203; State Office Building, 1525 Fairfield Avenue, Shreveport, LA 71101; 3519 Patrick Street, Lake Charles, LA 70605; 3501 Chateau Boulevard, West Wing, Kenner, LA 70065; 100 Asma Boulevard, Suite 151, Lafayette, LA 70508; 104 Lococo Drive, Raceland, LA 70394 or on the Internet at <http://www.deq.state.la.us/planning/regs/index.htm>.

James H. Brent, Ph.D.
Assistant Secretary

TITLE 33
ENVIRONMENTAL QUALITY
Part IX. Water Quality Regulations

Chapter 11. Surface Water Quality Standards

§1105. Definitions

* * *

[See prior text]

Clean Techniques — those requirements (or practices for sample collection and handling) necessary to produce reliable analytical data in the microgram per liter (µg/L) or part per billion (ppb) range.

* * *

[See prior text]

Ultra-Clean Techniques — those requirements or practices necessary to produce reliable analytical data in the nanogram per liter (ng/L) or part per trillion (ppt) range.

* * *

[See prior text]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 10:745 (October 1984), amended LR 15:738 (September 1989), LR 17:264 (March 1991), LR 20:883 (August 1994), amended by the Office of Environmental Assessment, Environmental Planning Division LR 25

§1111. Water Use Designations

There are seven water uses designated for surface waters in Louisiana: primary contact recreation, secondary contact recreation, fish and wildlife propagation, drinking water supply, oyster propagation, agriculture, and outstanding natural resource waters. Designated uses assigned to each subsegment apply to all water bodies (listed water body and tributaries/distributaries of the listed water body) contained in that subsegment unless unique chemical, physical, and/or biological conditions preclude such uses. However, the designated uses of drinking water supply, oyster propagation, and/or outstanding natural resource waters apply only to the water bodies specifically named in Table 3 (LAC 33:IX.1123) and not to any tributaries and distributaries to such water body which are typically contained in separate subsegments. A description of each designated use follows.

* * *

[See prior text in A-B]

C. Fish and Wildlife Propagation. Fish and wildlife propagation includes the use of water for aquatic habitat, food, resting, reproduction, cover, and/or travel corridors for any indigenous wildlife and aquatic life species associated with the aquatic environment. This use also includes the maintenance of water quality at a level that prevents damage to indigenous wildlife and aquatic life species associated with the aquatic environment ~~aquatic biota~~ and contamination of aquatic biota consumed by humans. The subcategory of "limited aquatic life and wildlife use" recognizes the natural variability of aquatic habitats, community requirements, and local environmental conditions. Limited aquatic life and wildlife use may be designated for water bodies having habitat that is uniform in structure and morphology with most of the regionally expected aquatic species absent, low species diversity and richness, and/or a severely imbalanced trophic structure. Aquatic life able to survive and/or propagate in such water bodies include species tolerant of severe or variable environmental conditions. Water bodies that might qualify for the limited aquatic life and wildlife use subcategory include intermittent streams and man-made water bodies with characteristics including, but not limited to, irreversible hydrologic modification, anthropogenically and irreversibly degraded water quality, uniform channel morphology, lack of channel structure, uniform substrate, lack of riparian structure, and similar characteristics making the available habitat for aquatic life and wildlife suboptimal. Limited aquatic life and wildlife use will be denoted in Table 3 (LAC 33:IX.1123) as an "L."

* * *

[See prior text in D-G]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 10:745 (October 1984), amended LR 15:738 (September 1989), LR 20:883 (August 1994), amended by the Office of Environmental Assessment, Environmental Planning Division LR 25

§1113. Criteria

* * *

[See prior text in A-C.2]

3. Dissolved Oxygen. The following dissolved oxygen (DO) values represent minimum criteria for the type of water specified. Naturally occurring variations below the criterion specified may occur for short periods. These variations reflect such natural phenomena as the reduction in photosynthetic activity and oxygen production by plants during hours of darkness. However, no waste discharge or human activity shall lower the DO concentration below the specified minimum. These DO criteria are designed to protect indigenous wildlife and aquatic life species associated with the aquatic environment and shall apply except in those water bodies ~~which~~that qualify for an excepted water use as specified in LAC 33:IX.1109.C or where

exempted or excluded elsewhere in these standards. DO criteria for specific state water bodies are contained in LAC 33:IX.1123.

a. Fresh Water. For a diversified population of fresh warmwater biota including sport fish, the DO concentration shall be at or above 5 mg/L. Fresh warmwater biota is defined in LAC 33:IX.1105.

* * *

[See prior text in C.3.b - 6.e]

f. The use of clean or ultra-clean techniques may be required to definitively assess ambient levels of some pollutants (e.g., EPA method 1669 for metals) or to assess such pollutants when numeric or narrative water quality standards are not being attained. Clean and ultra-clean techniques are defined in LAC 33:IX.1105.

TABLE 1 NUMERICAL CRITERIA FOR SPECIFIC TOXIC SUBSTANCES (In micrograms per liter (µg/L) or parts per billion (ppb) unless designated otherwise)						
Toxic Substance	Aquatic Life Protection				Human Health Protection	
	Freshwater		Marine Water		Drinking Water Supply ¹	Non-Drinking Water Supply ²
	Acute	Chronic	Acute	Chronic		
Pesticides and PCB's						
* * *						
[See prior text in Aldrin - DDE]						
Dieldrin	2.500 0.2374	0.00190 0.0557	0.710	0.0019	0.05 ng/l	0.05 ng/l
Endosulfan	0.22	0.0560	0.034	0.0087	0.47	0.64
Endrin	0.180 0.0864	0.00230 0.0375	0.037	0.0023	0.26	0.26
* * *						
[See prior text in Heptachlor - 2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) ⁹]						
Metals and Inorganics						
Arsenic	360 339.8	190 147.9	69.00	36.00	50.0	--
Chromium III (Tri) ^{7,8}	980 310	120 103	515.00	103.00	50.0	--
	1,700 537	210 181				

TABLE 1
NUMERICAL CRITERIA FOR SPECIFIC TOXIC SUBSTANCES
(In micrograms per liter (µg/L) or parts per billion (ppb) unless designated otherwise)

Toxic Substance	Aquatic Life Protection				Human Health Protection	
	Freshwater		Marine Water		Drinking Water Supply ¹	Non-Drinking Water Supply ²
	Acute	Chronic	Acute	Chronic		
	3,100 <u>980</u>	370 <u>318</u>				
Chromium VI (Hex)	16	11	1.10 mg/L	50.00	50.0	--
Zinc ^{7,8}	65 <u>64</u>	59 <u>58</u>	95.00 <u>90</u>	86.00 <u>81</u>	5.0 mg/L	--
	120 <u>117</u>	110 <u>108</u>				
	210 <u>205</u>	190 <u>187</u>				
Cadmium ^{7,8}	15.4 <u>15</u>	0.66 <u>0.62</u>	45.62 <u>45.34</u>	10.00	10.0	--
	33.7 <u>32</u>	1.13 <u>1.03</u>				
	73.6 <u>67</u>	2.01 <u>1.76</u>				
Copper ^{7,8}	9.9 <u>10</u>	7.1 <u>7</u>	4.37 <u>3.63</u>	4.37 <u>3.63</u>	1.0 mg/L	--
	19.2 <u>18</u>	12.8 <u>12</u>				
	36.9 <u>35</u>	23.1 <u>22</u>				
Lead ^{7,8}	34 <u>30</u>	1.31 <u>1.2</u>	220.0 <u>209</u>	8.50 <u>8.08</u>	50.0	--

TABLE 1
NUMERICAL CRITERIA FOR SPECIFIC TOXIC SUBSTANCES
(In micrograms per liter (µg/L) or parts per billion (ppb) unless designated otherwise)

Toxic Substance	Aquatic Life Protection				Human Health Protection	
	Freshwater		Marine Water		Drinking Water Supply ¹	Non-Drinking Water Supply ²
	Acute	Chronic	Acute	Chronic		
	82 <u>65</u>	3.2 <u>2.5</u>				
	200 <u>138</u>	7.75 <u>.31</u>				
Mercury ⁸	2.4 <u>2.04</u>	0.012 ¹⁰ <u>11</u>	2.1 <u>2</u>	0.025 ¹⁰ <u>11</u>	2.0	--
Nickel ^{7,8}	790 <u>788</u>	88	75.00 <u>74</u>	8.30 <u>8.2</u>	--	--
	1,400 <u>1397</u>	160				
	2,500 <u>2,495</u>	280 <u>279</u>				
* * *						
[See prior text in Cyanide]						

* * *

[See prior text in Notes 1 - 6]

⁷ Hardness-dependent criteria for freshwater are based on the following natural logarithm formulas multiplied by conversion factors (CF) for acute and chronic protection (in descending order, numbers represent criteria in µg/L at hardness values of 50, 100, and 200 mg/L CaCO₃, respectively):

Chromium III:	acute =	$e^{(0.8190[\ln(\text{hardness})] + 3.6880)}$	<u>X CF</u>
	chronic =	$e^{(0.8190[\ln(\text{hardness})] + 1.5610)}$	<u>X CF</u>
Zinc:	acute =	$e^{(0.8473[\ln(\text{hardness})] + 0.8604)}$	<u>X CF</u>
	chronic =	$e^{(0.8473[\ln(\text{hardness})] + 0.7614)}$	<u>X CF</u>
Cadmium:	acute =	$e^{(1.1280[\ln(\text{hardness})] - 1.6774)}$	<u>X CF</u>
	chronic =	$e^{(0.7852[\ln(\text{hardness})] - 3.4900)}$	<u>X CF</u>
Copper:	acute =	$e^{(0.9422[\ln(\text{hardness})] - 1.3844)}$	<u>X CF</u>
	chronic =	$e^{(0.8545[\ln(\text{hardness})] - 1.3860)}$	<u>X CF</u>
Lead:	acute =	$e^{(1.2730[\ln(\text{hardness})] - 1.4600)}$	<u>X CF</u>
	chronic =	$e^{(1.2730[\ln(\text{hardness})] - 4.7050)}$	<u>X CF</u>
Nickel:	acute =	$e^{(0.8460[\ln(\text{hardness})] + 3.3612)}$	<u>X CF</u>
	chronic =	$e^{(0.8460[\ln(\text{hardness})] + 1.1645)}$	<u>X CF</u>

⁸ Freshwater and saltwater metals criteria are expressed in terms of the dissolved metal in the water column. The standard was calculated by multiplying the previous water quality criteria by a conversion factor (CF). The CF represents the EPA-recommended conversion factors found in 60 FR 68354-68364 (December 10, 1998) and shown in Table 1A.

⁹ ¹⁰ ppq = parts per quadrillion

⁹ ¹⁰ Advances in scientific knowledge concerning the toxicity, cancer potency, metabolism, or exposure pathways of toxic pollutants that affect the assumptions on which existing criteria are based may necessitate a revision of dioxin numerical criteria at any time. Such revisions, however, will be accomplished only after proper consideration of designated water uses. Any proposed revision will be consistent with state and federal regulations.

¹⁰ ¹¹ If the four-day average concentration for total mercury exceeds 0.012 $\mu\text{g/L}$ in freshwater or 0.025 $\mu\text{g/L}$ in saltwater more than once in a three-year period, the edible portion of aquatic species of concern must be analyzed to determine whether the concentration of methyl mercury exceeds the FDA action level (1.0 mg/kg). If the FDA action level is exceeded, the state must notify the appropriate EPA Regional Administrator, initiate a revision of its mercury criterion in its water quality standards so as to protect designated uses, and take other appropriate action such as issuance of a fish consumption advisory for the affected area.

Table 1A. Conversion Factors for Dissolved Metals ^a				
<u>Metal</u>	<u>Conversion Factor</u> <u>Freshwater Acute</u> <u>Criteria</u>	<u>Conversion Factor</u> <u>Freshwater Chronic</u> <u>Criteria</u>	<u>Conversion Factor</u> <u>Marine Water Acute</u> <u>Criteria</u>	<u>Conversion Factor</u> <u>Marine Water Chronic</u> <u>Criteria</u>
<u>Arsenic</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>	<u>1.00</u>
<u>Chromium III</u> <u>(Tri)</u>	<u>0.316</u>	<u>0.86</u>	<u>NA</u>	<u>NA</u>
<u>Chromium VI</u> <u>(Hex)</u>	<u>0.982</u>	<u>0.962</u>	<u>0.993</u>	<u>0.993</u>
<u>Zinc</u>	<u>0.978</u>	<u>0.986</u>	<u>0.946</u>	<u>0.946</u>
<u>Cadmium^b</u>	<u>0.973</u>	<u>0.938</u>	<u>0.994</u>	<u>0.994</u>
<u>Copper</u>	<u>0.960</u>	<u>0.960</u>	<u>0.830</u>	<u>0.830</u>
<u>Lead^b</u>	<u>0.892</u>	<u>0.892</u>	<u>0.951</u>	<u>0.951</u>
<u>Mercury</u>	<u>0.85^c</u>	<u>N/A^d</u>	<u>0.85^c</u>	<u>N/A^d</u>
<u>Nickel</u>	<u>0.998</u>	<u>0.997</u>	<u>0.990</u>	<u>0.990</u>

^aThe conversion factors are given to three decimal places because they are intermediate values in the calculation of dissolved criteria. Conversion factors for the marine water chronic criteria are not yet available.

^bConversion factors are hardness dependent. The values shown are with a hardness of 50 mg/L as CaCO₃. Conversion factors for any hardness can be calculated using the following equations:

Cadmium Acute CF = 1.136672-[(ln hardness)(0.041838)]

Cadmium Chronic CF = 1.101672-[(ln hardness)(0.041838)]

Lead Acute and Chronic CF = 1.46203-[(ln hardness)(0.145712)]

^cConversion factor from: Office of Water Policy and Technical Guidance on Interpretation and Implementation of Aquatic Life Metals Criteria, October 1, 1993. Factors were expressed to two decimal places.

^dNot appropriate to apply CF to chronic value for mercury because it is based on mercury residues in aquatic organisms rather than toxicity.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 10:745 (October 1984), amended LR 15:738 (September 1989), LR 17:264 (March 1991), LR 17:967 (October 1991), repromulgated LR 17:1083 (November 1991), amended LR 20:883 (August 1994), LR 24:688 (April 1998), amended by the Office of Environmental Assessment, Environmental Planning Division LR 25

§1115. Application Of Standards

* * *

[See prior text in A-C.3]

4. A mixing zone shall not be allowed to adversely impact a nursery area for aquatic life species, habitat for waterfowl or indigenous wildlife associated with the aquatic environment, or any area approved by the state for oyster propagation. Mixing and mixing zones shall not include an existing drinking water supply intake if they would significantly impair the drinking water intake.

* * *

[See prior text in C.5-13.a]

b. the diffused discharge must not adversely impact ~~aquatic life~~ nursery areas for aquatic life species or indigenous wildlife associated with the aquatic environment, propagation areas, zones of passage for aquatic life (see Subsection C.10 of this Section), wildlife uses, recreational uses, or drinking water supply intakes;

* * *

[See prior text in C.13.c-f]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 10:745 (October 1984), amended LR 15:738 (September 1989), LR 17:264 (March 1991), LR 17:967 (October 1991), repromulgated LR 17:1083 (November, 1991), amended LR 20:883 (August 1994), amended by the Office of Environmental Assessment, Environmental Planning Division LR 25

§1117. References

A. The following references were used in developing LAC 33:IX,1101) 1115 or are referred to in those Sections:

1. Chabreck, R.H., and R.G. Linscombe. 1978. Vegetative Type Map of the Louisiana Coastal Marshes. New Orleans: Louisiana Department of Wildlife and Fisheries.

2. Louisiana Department of Environmental Quality. (continuous). Fixed Station Long-term Ambient Surface Water Quality Network. Baton Rouge: Office of ~~Water Resources~~Environmental Assessment, Water Pollution Control Division~~Environmental Evaluation Division~~.

3. National Academy of Sciences, National Academy of Engineering. 1974. Water Quality Criteria, 1972. Environmental Protection Agency, Ecological Research Series, EPA R3.73:033. Washington, D.C.:U.S. Government Printing Office.

4. U.S. Environmental Protection Agency. 1976. Quality Criteria for Water. Washington, D.C.:EPA.

5. U.S. Environmental Protection Agency. 1983. Water Quality Standards Handbook. WH-585. Washington, D.C.: Office of Water Regulations and Standards, EPA.

6. U.S. Environmental Protection Agency. 1983. Technical Support Manual: Waterbody Surveys and Assessments for Conducting Use Attainability Analyses. WH-585. Washington, D.C.: Office of Water Regulations and Standards, EPA.

7. U.S. Environmental Protection Agency. 1986. Quality Criteria for Water: 1986. EPA Series No. 440/5-86-001. Washington, D.C.:U.S. Government Printing Office.

8. U.S. Environmental Protection Agency. 1989. Establishment of Ambient Criteria to Limit Human Exposure to Contaminants in Fish and Shellfish. Guidance Document. Washington, D.C.: Office of Water Regulations and Standards, EPA.

9. U.S. Environmental Protection Agency. (continuous). Ambient Water Quality Criteria. EPA Series No. 440/5-80-84-85, 86. Washington, D.C.:EPA.

10. U.S. Environmental Protection Agency. 1991. Technical Support Document for Water Quality-Based Toxics Control. EPA/505/2-90-001.

11. U.S. Environmental Protection Agency. December 22, 1992. Water Quality Standards; Establishment of Numeric Criteria for Priority Toxic Pollutants; States' Compliance. Federal Register: Vol. 57, No. 246. WH-FRL-4543-9. Washington, D.C.: Office of Science and Technology, EPA.

12. U.S. Environmental Protection Agency. April, 1995. Method 1669: Sampling Ambient Water for Trace Metals At EPA Water Quality Criteria Levels. EPA 821-R-95-034.

13. Webster's II New Riverside University Dictionary, Anne H. Soukhanov, editor. 1988. Houghton Mifflin Company. Boston, MA.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 10:745 (October 1984), amended LR 15:738 (September 1989), LR 17:264 (March 1991), LR 20:883 (August 1994), amended by the Office of Environmental Assessment, Environmental Planning Division LR 25

§1121. Regulation of Toxic Substances Based on the General Criteria

* * *

[See prior text in A - B.3.a]

b. Both acute toxicity and chronic toxicity tests may be required. Test methods found in the following sources or their updated versions should be followed: "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms," 4th Edition, EPA/600/4-90/027E, EPA, 1990~~3~~; "Short-Term Methods for Estimating the Chronic Toxicity of Effluents And Receiving Waters To Freshwater Organisms," 3rd Edition, EPA/600/4-89~~91~~/00~~12~~, EPA, 1989~~94~~; and "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms," 2nd Edition, EPA/600/4-87~~91~~/028~~03~~, EPA, ~~May, 1988~~.

* * *

[See prior text in B.3.b.i - iii]

(a). for receiving water bodies with salinities less than 2 ‰ (2 ppt or 2,000 ppm):

* * *

[See prior text in B.3.b.iii (a)(i) - (vi)]

(b). for receiving water bodies with salinities equal to or greater than 2 ‰ (2 ppt or 2,000 ppm):

* * *

[See prior text in B.3.b.iii (b)(i) - C.5]

D. References. The following references were used in developing or were cited in this Section:

1. U.S. Environmental Protection Agency. 1986. Quality Criteria for Water: 1986. EPA 440/5-86-001. Washington, D.C.: U.S. Government Printing Office.

~~U.S. Environmental Protection Agency. 1991. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027.~~

2. U.S. Environmental Protection Agency. 1991. Methods for Aquatic Toxicity Identification Evaluations: Phase I, Toxicity Characterization Procedures. EPA/600/6-91/003. Washington, D.C.: EPA.

~~U.S. Environmental Protection Agency. 1989. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. EPA/600/4-89/001.~~

3. U.S. Environmental Protection Agency. 1991. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. 2nd Edition. EPA/600/4-91/003.

4. U.S. Environmental Protection Agency. 1991. Technical Support Document for Water Quality-Based Toxics Control. EPA/505/2-90-001.

~~U.S. Environmental Protection Agency. 1986. Quality Criteria for Water. 1986. EPA 440/5-86-001. Washington, D.C.: U.S. Government Printing Office.~~

~~U.S. Environmental Protection Agency. 1991. Methods for Aquatic Toxicity Identification Evaluations: Phase I, Toxicity Characterization Procedures. EPA/600/6-91/003. Washington, D.C.: EPA.~~

~~U.S. Environmental Protection Agency. 1989. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Marine and Estuarine Organisms. EPA/600/4-89/001.~~

5. U.S. Environmental Protection Agency. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. 4th Edition. EPA/600/4-90/027F.

6. U.S. Environmental Protection Agency. 1994. Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms. 3rd Edition. EPA/600/4-91/002.

E. Additional Toxicity Testing Guidance. The following references are cited as guidance documents that are used for biomonitoring:

1. U.S. Environmental Protection Agency. 1994. Methods for Measuring the Toxicity and Bioaccumulation of Sediment-Associated Contaminants with Freshwater Invertebrates. EPA/600/R-94/024.

2. U.S. Environmental Protection Agency. 1994. Methods for Assessing the Toxicity of Sediment Associated Contaminants with Estuarine and Marine Amphipods. EPA/600/R-94/025.

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 15:738 (September 1989), amended LR 17:264 (March 1991), LR 20:883 (August 1994), amended by the Office of Environmental Assessment, Environmental Planning Division LR 25

§1123. Numerical Criteria and Designated Uses

* * *

[See prior text in A - C.2]

3. Designated Uses. The following are the category definitions of Designated Uses that are used in Table 3 under the subheading "DESIGNATED USES."

A- Primary Contact Recreation

B- Secondary Contact Recreation

C- Propagation of Fish and Wildlife

L- Limited Aquatic Life and Wildlife Use

D- Drinking Water Supply

E- Oyster Propagation

F- Agriculture

G- Outstanding Natural Resource Waters

Numbers in brackets (e.g. [1])) refer to endnotes listed at the end of the table.

Table 3. Numerical Criteria and Designated Uses									
Code	Stream Description	Designated Uses	Criteria						
			CL	SO ₄	DO	pH	BAC	°C	TDS
ATCHAFALAYA RIVER BASIN (01)									
* * *									
[See prior text in 010101-040910]									
040911	Grand Lagoon - Grand Lagoon and Associated Canals (<u>Estuarine</u>)	A B C	N/A	N/A	4.0	6.0 - 8.5	1	32	N/A
* * *									
[See prior text in 041001 - 041302]									
041401	New Orleans East Leveed Waterbodies (<u>Estuarine</u>)	A B C	N/A	N/A	4.0	6.0 - 8.5	1	32	N/A
* * *									
[See prior text in 041501 - 041807]									
041808	New Canal (<u>Estuarine</u>)	A B C	N/A	N/A	4.0	6.5 - 9.0	1	35	N/A
* * *									
[See prior text in 041901 -050101]									

Table 3. Numerical Criteria and Designated Uses									
Code	Stream Description	Designated Uses	Criteria						
			CL	SO ₄	DO	pH	BAC	°C	TDS
050102	Bayou Joe Marcel - Headwaters to Bayou Des Cannes	A B C F	90	30	5.0 [16]	6.0 - 8.5	1	32	260
050103	Bayou Mallet - Headwaters to Bayou Des Cannes	A B C F	90	30	5.0 [16]	6.0 - 8.5	1	32	260
* * *									
[See prior text in 050201 - 050302]									
050303	Castor Creek - Headwaters to confluence with Bayou Nezpique	A B C	90	30	5.0 [16]	6.0 - 8.5	1	32	260
050304	Bayou Blue - Headwaters to confluence with Bayou Nezpique	A B C	90	30	5.0 [16]	6.0 - 8.5	1	32	260
* * *									
[See prior text in 050401 - 050501]									
050601	Lacassine Bayou - Headwaters to Mermentau RiverGrand Lake	A B C F	90	10	[16]	6.0 - 8.5	1	32	400

Table 3. Numerical Criteria and Designated Uses									
Code	Stream Description	Designated Uses	Criteria						
			CL	SO ₄	DO	pH	BAC	°C	TDS
* * *									
[See prior text 050602 - 060203]									
060204	Bayou Courtableau - origin to West Atchafalaya Borrow Pit Canal	A B C	40	30	5.0	6.0 - 8.5	1	32	220
060205	Bayou Teche - Headwaters at Bayou Courtableau to Interstate Hwy. 10	A B C	40	30	5.0	6.0 - 8.5	1	32	220
060206	Indian Creek and Indian Creek Reservoir	A B C D	10	5	5.0	6.0 - 8.5	1	32	100
* * *									
[See prior text in 060207 - 060212]									
060301	Bayou Teche - Interstate Hwy. 10 Headwaters at Bayou Courtableau to Keystone Locks and Dam	A B C	40	30	5.0	6.0 - 8.5	1	32	220
* * *									
[See prior text in 060401 - 060903]									

Table 3. Numerical Criteria and Designated Uses									
Code	Stream Description	Designated Uses	Criteria						
			CL	SO ₄	DO	pH	BAC	°C	TDS
060904	New Iberia Southern Drainage Canal - origin to Intracoastal Waterway Weeks Bay (Estuarine)	A B C	N/A	N/A	4.0	6.5 - 9.0	1	35	N/A
060905	New Iberia Southern Drainage Canal - Intracoastal Waterway to Weeks Bay (Estuarine)	A B C	N/A	N/A	4.0	6.5 - 9.0	1	35	N/A
060906	Intracoastal Waterway - New Iberia Southern Drainage Canal to Bayou Sale (Estuarine)	A B C	N/A	N/A	4.0	6.5 - 9.0	1	35	N/A
* * *									
[See prior text in 060907 - 061104]									
061105	Marsh Island (Estuarine)	A B C	N/A	N/A	4.0	6.5 - 9.0	4	35	N/A
* * *									
[See prior text in 061201 - 080911]									
080912	Tisdale Brake/Staulkinghead Creek - from origin to Little Bayou Boeuf	B L	500	200	[13]	6.0 - 8.5	2	32	1,500

Table 3. Numerical Criteria and Designated Uses									
Code	Stream Description	Designated Uses	Criteria						
			CL	SO ₄	DO	pH	BAC	°C	TDS
* * *									
[See prior text in 081001 - 081002]									
081003	Deer Creek - Headwaters to confluence with Boeuf River	B L	105	45	(13)	6.0 - 8.5	2	32	430
* * *									
[See prior text in 081101 - 081301]									
081401	Dugdemonia River - Headwaters to junction with Big Creek	A B C	250	750	[314]	6.0 - 8.5	1	32	2,000
* * *									
[See prior text in 081501 - 100304]									
100305	Mahlin Bayou/McCain Creek - origin to confluence with Twelve Mile Bayou	B L	175	75	(14)[13]	6.0 - 8.5	2	32	500
* * *									
[See prior text in 100306 - 100401]									

Table 3. Numerical Criteria and Designated Uses									
Code	Stream Description	Designated Uses	Criteria						
			CL	SO ₄	DO	pH	BAC	°C	TDS
100402	Red Chute Bayou - from Cypress Bayou junction to Flat River	A B C	250	75	(14) [13]	6.0 - 8.5	1	32	800
* * *									
[See prior text in 100403 - 101606]									
101607	Bayou Cocodrie - Highway 15 to Little Cross Bayou	B L	250	75	(13)	6.0 - 8.5	2	32	500
* * *									
[See prior text in 110101 - 120509]									
120601	Bayou Terrebonne - Houma to Company Canal (<u>Estuarine</u>)	A B C	445	105	4.0	6.0 - 9.0	1	32	1,230
* * *									
[See prior text in 120602 - 120806]									

ENDNOTES:

[See prior text in Notes 1 - 2]

PROPOSED/AUGUST 20, 1999

WP033

[3] Designated Naturally Dystrophic Waters Segment; Seasonal DO Criteria: 5.0 mg/L ~~November~~December - February, 3.0 mg/L
March - ~~October~~November

[See prior text in Notes 4 - 16]

AUTHORITY NOTE: Promulgated in accordance with R.S. 30:2074(B)(1).

HISTORICAL NOTE: Promulgated by the Department of Environmental Quality, Office of Water Resources, LR 15:738 (September 1989), amended LR 17:264 (March 1991), LR 20:431 (April 1994), LR 20:883 (August 1994), LR 21:683 (July 1995), LR 22:1123 (November 1996), LR 24:1926 (October 1998), amended by the Office of Environmental Assessment, Environmental Planning Division LR 25

FISCAL AND ECONOMIC IMPACT STATEMENT
FOR ADMINISTRATIVE RULES LOG #: WP033

Person

Preparing

Statement: Kristine L. Pintado Dept.: Environmental Quality
Phone: (504) 765-0511 Office: Environmental Assessment

Return

Rule

Address: P.O. Box 82178 Title: 1998 Revisions to
Baton Rouge, LA 70884-2178 Surface Water Quality
Standards (LAC 33:IX, Chapter 11)
Date Rule
Takes Effect: Upon Promulgation

SUMMARY

(Use complete sentences)

In accordance with Section 953 of Title 49 of the Louisiana Revised Statutes, there is hereby submitted a fiscal and economic impact statement on the rule proposed for adoption, repeal or amendment. THE FOLLOWING STATEMENTS SUMMARIZE ATTACHED WORKSHEETS, I THROUGH IV AND WILL BE PUBLISHED IN THE LOUISIANA REGISTER WITH THE PROPOSED AGENCY RULE.

I. ESTIMATED IMPLEMENTATION COSTS (SAVINGS) TO STATE OR LOCAL GOVERNMENTAL UNITS (Summary)

No significant effect of this proposed rule on state or local governmental expenditures is anticipated. Some local municipal sewage treatment plants may experience slight increases in upgrade or operating costs, depending on the significance of industrial discharges into their systems. Costs incurred as a result of this rule may be conveyed to industrial facilities through increased user fees. Most costs required to meet the proposed water quality standards limits have already been required by the US Environmental Protection Agency (EPA) to meet current water quality-based and/or technology-based permit limits.

II. ESTIMATED EFFECT ON REVENUE COLLECTIONS OF STATE OR LOCAL GOVERNMENTAL UNITS (Summary)

No significant effect on state or local governmental revenue collections is anticipated. State or local municipal sewage treatment plants may raise user fees charged to industrial customers to cover their costs, if any costs are incurred. Increases in user fees resulting from this rule are site-specific, are determined by the individual sewage treatment plant's circumstances, and cannot be estimated at this time.

III. ESTIMATED COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS OR NON-GOVERNMENTAL GROUPS (Summary)

No significant costs and/or economic benefits to directly affected persons or non-governmental groups are anticipated. Members of the regulated community subject to these revised water quality standards may incur some additional costs due to increased controls on toxic substances to protect aquatic life and beneficial uses. However, it is not anticipated that these standards will impose a significant increase in costs beyond that attributable to existing state and federal permit requirements. Increases in costs beyond present state and federal requirements can be reduced by practicing the use of source reduction or pollution prevention. Business and industrial customers using municipal sewage treatment plants may experience a slight increase in user fees; however, these costs are site-specific, are determined by the individual sewage treatment plant's circumstances, and cannot be estimated at this time. One very important benefit is the enhanced protection of Louisiana's seafood industry through the possible decrease in exposure to toxic substances within the ambient waters of the state.

IV. ESTIMATED EFFECT ON COMPETITION AND EMPLOYMENT (Summary)

No significant effect on competition and employment is anticipated.

Signature of Agency Head or Designee

LEGISLATIVE FISCAL OFFICER OR DESIGNEE

James H. Brent, PhD , Assistant Secretary
Typed Name and Title of Agency Head or
Designee

Date of Signature

Date of Signature

LFO 10/05/92

FISCAL AND ECONOMIC IMPACT STATEMENT FOR ADMINISTRATIVE RULES

The following information is requested in order to assist the Legislative Fiscal Office in its review of the fiscal and economic impact statement and to assist the appropriate legislative oversight subcommittee in its deliberation on the proposed rule.

- A. Provide a brief summary of the content of the rule (if proposed for adoption or repeal) or a brief summary of the change in the rule (if proposed for amendment). Attach a copy of the notice of intent and a copy of the rule proposed for initial adoption or repeal (or, in the case of a rule change, copies of both the current and proposed rules with amended portions indicated).

The water quality standards establish provisions for the protection of surface water quality and consist of policy statements, designated water uses, and numerical and narrative criteria which set limits for various water quality parameters. This proposed revision to the current (1993) water quality standards includes (1) addition of new language that states the use of clean or ultra clean techniques may be necessary in some situations; (2) revision of several numerical criteria with current data; (3) addition of updated and new references for biomonitoring; (4) revision of numerical criteria and designated uses table; and (5) addition of language to clarify the links between dissolved oxygen and the designated uses for fish and wildlife propagation. The water quality standards described in the document are applicable to the ambient surface waters of streams and other waterbodies of the state and do not apply to groundwater.

- B. Summarize the circumstances which require this action. If the Action is required by federal regulation, attach a copy of the applicable regulation.

Federal law governing water quality standards requires that states review and revise, as appropriate, their water quality standards every three years [Water Quality Act of 1987 PL 100-4 Section 303(c)]. These regulations are promulgated by the Department of Environmental Quality under the authority of La. R.S. 30:2074 (B) (1).

- C. Compliance with Act II of the 1986 First Extraordinary Session

(1) Will the proposed rule change result in any increase in the expenditure of funds? If so, specify amount and source of funding.

The proposed rule will not result in any increase in the expenditure of funds to the state.

2) If the answer to (1) above is yes, has the Legislature specifically appropriated the funds necessary for the associated expenditure increase?

(a) ____ Yes. If yes, attach documentation.

(b) ____ No. If no, provide justification as to why this rule change should be published at this time.

This is not applicable.

FISCAL AND ECONOMIC IMPACT STATEMENT

WORKSHEET

I. A. COSTS OR SAVINGS TO STATE AGENCIES RESULTING FROM THE ACTION PROPOSED

1. What is the anticipated increase (decrease) in costs to implement the proposed action?

No significant increase/decrease in costs to implement this rule is anticipated.

COSTS	FY 99-00	FY 00-01	FY 01-02
PERSONAL SERVICES	0	0	0
OPERATING EXPENSES	0	0	0
PROFESSIONAL SERVICES	0	0	0
OTHER CHARGES	0	0	0
EQUIPMENT	0	0	0
TOTAL	0	0	0
MAJOR REPAIR & CONST.	0	0	0
POSITIONS(#)	0	0	0

2. Provide a narrative explanation of the costs or savings shown in "A.1.", including the increase or reduction in workload or additional paperwork (number of new forms, additional documentation, etc.) anticipated as a result of the implementation of the proposed action. Describe all data, assumptions, and methods used in calculating these costs.

This is not applicable.

3. Sources of funding for implementing the proposed rule or rule change.

This is not applicable.

SOURCE	FY 99-00	FY 00-01	FY 01-02
STATE GENERAL FUND	0	0	0
AGENCY SELF-GENERATED	0	0	0
DEDICATED	0	0	0

FEDERAL FUNDS	0	0	0
OTHER (Specify)	0	0	0
<hr/>			
TOTAL	0	0	0
<hr/>			

4. Does your agency currently have sufficient funds to implement the proposed action? If not, how and when do you anticipate obtaining such funds?

The Department currently has sufficient funds to implement the amendment.

FISCAL AND ECONOMIC IMPACT STATEMENT

WORKSHEET

B. COST OR SAVINGS TO LOCAL GOVERNMENTAL UNITS RESULTING FROM THE ACTION PROPOSED.

1. Provide an estimate of the anticipated impact of the proposed action on local governmental units, including adjustments in workload and paperwork requirements. Describe all data, assumptions and methods used in calculating this impact.

No significant impact is anticipated on local governments, including adjustments in workload and paperwork requirements. Some local municipal sewage treatment plants may experience slight increases in upgrade or operating costs, depending on the significance of industrial discharges into their systems. Costs incurred as a result of this rule may be conveyed to industrial facilities that discharge to these municipal facilities through increased user fees. Most costs required to meet the proposed water quality standards limits have already been required by the US Environmental Protection Agency (EPA) to meet current water quality-based and/or technology-based permit limits.

2. Indicate the sources of funding of the local governmental unit which will be affected by these costs or savings.

No significant effect on any sources of funding of local governmental units is anticipated to result from the implementation of the proposed rule. Local municipal sewage treatment plants may raise user fees charged to industrial customers to cover any increases in costs, if costs are incurred. Increases in user fees resulting from this rule are site-specific, are determined by the individual sewage treatment plant's circumstances, and cannot be estimated at this time.

II. EFFECT ON REVENUE COLLECTIONS OF STATE AND LOCAL GOVERNMENTAL UNITS

- A. What increase (decrease) in revenues can be anticipated from the proposed action?

No significant increase/decrease in revenues is anticipated.

REVENUE INCREASE/DECREASE	FY 99-00	FY 00-01	FY 01-02
STATE GENERAL FUND	0	0	0
AGENCY SELF-GENERATED	0	0	0
RESTRICTED FUNDS*	0	0	0

FEDERAL FUNDS	0	0	0
LOCAL FUNDS	0	0	0
<hr/>			
TOTAL	0	0	0
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*Specify the particular fund being impacted.

- B. Provide a narrative explanation of each increase or decrease in revenues shown in "A." Describe all data, assumptions, and methods used in calculating these increases or decreases.

There are no significant increases or decreases in revenues shown in “A”, so this question is not applicable.

III. COSTS AND/OR ECONOMIC BENEFITS TO DIRECTLY AFFECTED PERSONS OR NONGOVERNMENTAL GROUPS

A. What persons or non-governmental groups would be directly affected by the proposed action? For each, provide an estimate and a narrative description of any effect on costs, including workload adjustments and additional paperwork (number of new forms, additional documentation, etc.), they may have to incur as a result of the proposed action.

No significant effect on directly affected persons or non-governmental groups is anticipated. Members of the regulated community subject to these revised water quality standards may incur some additional costs due to increased controls on toxic substances to protect aquatic life and beneficial uses. These costs would be site-specific and determined by the individual discharger circumstances, and cannot be estimated at this time. Business and industrial customers using municipal sewage treatment plants may experience a slight increase in user fees; however, these costs are also site-specific, are determined by the individual sewage treatment plant's circumstances, and cannot be estimated at this time.

B. Also provide an estimate and a narrative description of any impact on receipts and/or income resulting from this rule or rule change to these groups.

No significant impact on receipts and/or income is anticipated. These standards changes will not impose a significant increase in costs beyond that attributable to existing state and federal permit requirements. Increases in costs beyond present state and federal requirements can be reduced by practicing the use of source reduction or pollution prevention. One very important benefit is the enhanced protection of Louisiana's seafood industry through the possible decrease in exposure to toxic substances within the ambient waters of the state.

FISCAL AND ECONOMIC IMPACT STATEMENT**WORKSHEET****IV. EFFECTS ON COMPETITION AND EMPLOYMENT**

Identify and provide estimates of the impact of the proposed action on competition and employment in the public and private sectors. Include a summary of any data, assumptions and methods used in making these estimates.

No significant impact on competition and employment is anticipated. Business may increase for equipment, treatment chemical suppliers, and analytical laboratories. Comparable water quality standards are applicable in other heavily industrialized states. Competition with neighboring states will be minimal, since all states must satisfy EPA requirements. While short-term effects are anticipated to be negligible, long-term effects may prove to be beneficial to Louisiana's economy, since improved water quality and more certainty regarding regulations will be viewed by industry as a positive inducement for expansion and/or location in Louisiana. This could increase employment and state-wide production in the long run.